

REMARKS/ARGUMENTS

Serial No. 09/768,016

Favorable consideration of the present application, as amended, is respectfully solicited.

Withdrawn claims 13-18 have been canceled without prejudice to filing a divisional application thereon.

It is submitted that claims 3-5, 7, 10 and 11 are not anticipated by the Tuma patent. In this respect, claim 3 and dependent claims 4 and 5 all include the limitation of a "first basic salt being primarily associated with said adsorbent, and said second basic salt being primarily associated with said binder." The Tuma patent is best characterized by a composition which includes an adsorbent, a basic salt (potassium carbonate) and polyvinylpyrrolidinone. See column 11, lines 31-34. There is no teaching in this patent of the above-quoted limitations of a first basic salt being primarily associated with the adsorbent and a second basic salt being primarily associated with the binder. The reason that a first basic salt is primarily associated with the adsorbent is because of its capacity to absorb acid gases, and the reason that a second basic salt is primarily associated with the binder is because it both absorbs acid gases and it mixes more readily with the binder than the first basic salt so that it can absorb acid-gases which are adsorbed and then desorbed from the binder. This is set forth in the first paragraph on page 5 of the specification. ✕ Furthermore, as set forth in the method of fabrication in the last paragraph on page 6 of the specification, the adsorbent

and the first basic salt are mixed together separately from the mixing together of the binder and the second basic salt to provide more intimate respective mixings than if all of the components were mixed simultaneously. Thus there are good reasons for having the first basic salt primarily associated with the adsorbent and the second basic salt being primarily associated with the binder, as set forth in claim 3. As noted above, there is nothing in the Tuma patent which teaches the above-quoted claimed subject matter.

It is submitted that claim 4 is patentable for the same reasons as claim 3 on which it is dependent and for the additional reason that the first basic salt is defined as being selected from the group consisting of sodium and potassium carbonates and bicarbonates.

It is submitted that claim 5 is patentable for the same reasons as claim 3 and for the additional reason that it defines the first and second basic salts as being selected from the group consisting of sodium and potassium carbonates and bicarbonates.

It is submitted that method claim 7 is patentable over Tuma for essentially the same reasons set forth above relative to claim 3. In this respect, it is directed to a method of absorbing acid gases from an electronic device including the step of providing an acid-gas absorbing tablet which includes "a first basic salt primarily associated with said adsorbent, a second basic salt primarily associated with said binder."

It is submitted that claim 10 is patentable for the same reasons as claim 7 on which it is dependent and for the additional reason that it defines the first basic salt as being selected from the group consisting of sodium and potassium carbonates and bicarbonates.

It is submitted that claim 11 is patentable for the same reasons as claim 7 on which it is dependent and for the additional reason that it recites that "said first basic salt and said second basic salt are selected from the group consisting of sodium and potassium carbonates and bicarbonates."

It is submitted that claims 3-5, 7, 10 and 11 are patentable over Tuma which was relied on to reject these claims under 35 USC 103. In the rejection the Examiner acknowledged that

" ...Tuma does not teach a second salt primarily associated with the binder recited in applicant's claim 9. Nonetheless, Tuma teaches the binder and the adsorbent are mixed together (column 6). Hence, it would have been obvious for one of ordinary skill in the art to modify Tuma's adsorbent article with the expectation of at least similar result, because Tuma also teaches a shaped article useful in electronic device to adsorb acid gas. Absent of showing unexpected result, it is the position of the examiner that no criticality is seen in a particular second basic salt mixed with the binder."

First of all it is to be noted that all of the above claims include the limitation of a first basic salt primarily associated with the adsorbent and a second basic salt primarily associated with the binder. It is submitted that it would not have been obvious for one of ordinary skill in the art to modify Tuma's adsorbent article to produce the

above-quoted composition wherein a first basic salt is primarily associated with the adsorbent and a second basic salt is primarily associated with the binder. In this respect, there is nothing in the Tuma patent that even shows the problem recognized by applicants nor the solution thereof. As set forth in the specification, the basic problem was that the binder adsorbed and thereafter desorbed large quantities of acid-gases, as can be appreciated from Graphs C and D on pages 11 and 12 of the specification. In the composition of graphs C and D, the potassium carbonate was mixed only with the adsorbent, and this mixture was mixed with the polyvinylpyrrolidinone. There was no mixing of a second basic salt with the polyvinylpyrrolidinone. However, when there was a second basic salt primarily associated with the binder, the amount of desorbed gases was much less as clearly set forth in Graphs A and B on page 10 of the specification. Thus, the claims by reciting a first basic salt primarily associated with the adsorbent and a second basic salt primarily associated with the binder do in effect show a result, namely, less desorption of acid-gases, and such unexpected result could not have been foreseen from the teaching of Tuma. Accordingly, it is submitted that claims 3-5, 7, 10 and 11 are unobvious over Tuma and therefore patentable.

It is submitted that claims 6, 12 and 19-27 are patentable over Tuma and Osborne on which they were rejected under 35 USC 103. In the rejection the Examiner stated

"Tuma is relied upon for the reasons stated above. The reference is silent as to the teaching of sodium or potassium bicarbonate."

"Osborne teaches adsorbent composition comprising activated carbon powder, activated alumina, water, and sodium bicarbonate (columns 5-6)."

The Examiner then concluded

"Thus, it would have been prima facie obvious for one of ordinary skill in the art to prepare Tuma's adsorbent article using basic salts taught by Osborne, because the references teach the advantageous results in the use of basic salts in adsorbent composition. The expected result would be an adsorbent article in a variety of shapes useful to be placed in smaller spaces, such as disk drives."

Claim 6 is dependent on claim 3, claim 12 is dependent on claim 7 and claims 19-27 are dependent on claim 3, directly or indirectly. It is submitted that claims 6, 12 and 19-27 are patentable for the same reasons as their parent claims discussed above in view of the fact that Osborne does not overcome the deficiency of Tuma who does not disclose a claimed first basic salt being primarily associated with the adsorbent and the second basic salt being primarily associated with the binder. In this respect, while Osborne discloses basic salts in an adsorbent composition, it is submitted that there is no teaching therein that one of the basic salts can be primarily associated with a binder to produce applicants' special relationship with the binder in absorbing acid-gases which have been adsorbed and desorbed from the binder of a tablet. It is submitted that the recitation in the claims of the fact that a binder is part of the composition and that the second basic salt is primarily associated with the binder causes these claims to define

patentably over Tuma in view of Osborne, especially considering that nowhere in the two patents is there any recognition of the problem recognized by applicant nor the solution thereof. It is further submitted that there is no motivation in the prior art patents themselves to combine them. Accordingly, it is submitted that claims 6, 12 and 19-27 define patentably over the combined Tuma and Osborne patents.

Claims 28-37 have been added by the present amendment. Claim 28 is directed to a method of fabricating a mixture for producing an acid-gas absorbing tablet, and it comprises the steps of providing an adsorbent and a first basic salt, blending said adsorbent and said first basic salt to produce a first mixture, providing a binder and a second basic salt, blending the binder and the second basic salt to produce a second mixture, and blending the first and second mixtures. It is submitted that neither the Tuma taken individually nor in combination with Osborne teach the foregoing claimed subject matter as discussed in detail above relative to other claims.

Claim 29 adds to claim 28 that the first basic salt and second basic salt are selected from the group consisting of sodium and potassium carbonates and bicarbonates.

Claim 30 is dependent on claim 28 and recites that the first basic salt is selected from the group consisting of sodium and potassium carbonates and the second basic salt is selected from the group of sodium and potassium bicarbonates.

Claim 30 adds to claim 28 that the first basic salt is selected from the group consisting of sodium and potassium carbonates and that the second basic salt is selected from the group of sodium and potassium bicarbonates.

Claim 31 adds to claim 28 that the adsorbent is a blend of activated carbon and silica gel.

Claim 32 adds to claim 31 that both the first basic salt and the second basic salt are selected from the group consisting of sodium and potassium carbonates and bicarbonates.

Claim 33 adds to claim 31 that the first basic salt is selected from the group consisting of sodium and potassium carbonates and that the second basic salt is selected from the group of sodium and potassium bicarbonates.

Claim 34 adds to claim 31 that the blend of adsorbent is in any proportions including total activated carbon or total silica gel.

Claim 35 adds to claim 34 that the first basic salt and second basic salt are selected from the group consisting of sodium and potassium carbonates and bicarbonates.

Claim 36 adds to claim 34 that the first basic salt is selected from the group consisting of sodium and potassium carbonates and that the second basic salt is selected from the group of sodium and potassium bicarbonates.

Claim 37 has also been added by the present amendment and it is directed to fabricating a tablet from the mixture of claim 28 by pressing the blend of the first and second mixtures.

Independent claim 38 has also been added by the present amendment. This claim recites a tablet comprising a first blended mixture of at least one adsorbent and a basic salt, a second blended mixture of a binder and a second basic salt, and a blended mixture of said first and second blended mixtures. It is submitted that Tuma taken individually, nor in combination with Osborne, do not teach the foregoing for reasons set forth in detail above.

Claims 39-46 have also been added by the present amendment. Claim 39 is in "means plus function" format and it recites "first blended mixture means for absorbing an acid-gas by converting said acid-gas into a salt and carbon dioxide and water which is adsorbed by an adsorbent therein for subsequent evaporation to the atmosphere, and second blended mixture means including a binder for binding said second blended mixture means with said first blended mixture means and for both absorbing said acid-gas by converting said acid-gas into a salt and carbon dioxide and water which is adsorbed by said adsorbent for subsequent evaporation to the atmosphere and for converting said acid-gas which is adsorbed and desorbed from said binder into a salt and carbon dioxide and water which is adsorbed by said adsorbent for subsequent evaporation to the atmosphere." It is submitted that there is absolutely no teaching in Tuma, nor Tuma in combination with Osborne, of the foregoing subject matter of claim 39.

Claim 40 has also been added by the present amendment, and it is submitted that this claim is patentable for the same reasons as claim 39 on which it is dependent and



for the additional reason that it adds that the first blended mixture means comprises at least one adsorbent and a first basic salt and wherein the second blended mixture means comprises the binder and a second basic salt.

Claim 41 is dependent on claim 40 and adds thereto that the first basic salt is selected from the group of sodium potassium carbonates and bicarbonates.

Claim 42 adds to claim 41 that the second basic salt is selected from the group of sodium and potassium carbonates and bicarbonates.

Claim 43 adds to claim 42 that the binder is polyvinylpyrrolidinone.

Claim 44 adds to claim 40 that the first basic salt is selected from the group of sodium and potassium carbonates.

Claim 45 adds to claim 44 that the second basic salt is selected from the group of sodium and potassium carbonates.

Claim 46 adds to claim 45 that the binder is polyvinylpyrrolidinone.

Claims 47 and 48 have also been added by the present amendment. Claim 47 is directed to an acid-gas absorbing tablet comprising an adsorbent, a first basic salt, a binder and a second basic salt. It is submitted that Tuma separately nor in combination with Osborne do not teach the foregoing combination for reasons set forth in detail relative to the above-discussed claims.

Claim 48 is dependent on claim 47 and adds thereto that the first salt is selected from the group consisting of sodium and potassium carbonates and that the second salt is selected from the group of sodium and potassium bicarbonates.

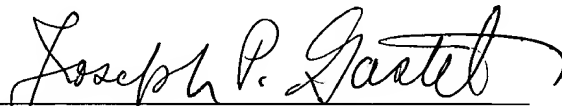
In view of the foregoing remarks favorable consideration and allowance of claims 3-7, 10-12 and 19-48 are respectfully solicited.

A check in the amount of \$366 is enclosed herewith in payment for two independent claims in excess of four independent claims originally paid for and eleven claims in excess of 27 total claims originally paid for. Any deficiency may be charged to Account No. 07-0450 of the undersigned.

Respectfully submitted,

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September 26, 2002

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## 3. (AMENDED)

An acid-gas absorbing tablet comprising in relatively sufficient proportions by weight at least one adsorbent, a binder, a first basic salt, a second basic salt,  
[An acid-gas absorbing tablet as set forth in claim 2 wherein] said [at least one] first basic salt [is] being primarily associated with said adsorbent, and [wherein] said second basic salt [is] being primarily associated with said binder.

## 4. (AMENDED)

An acid-gas absorbing tablet as set forth in claim [1] 3 wherein said [at least one] first basic salt is selected from the group consisting of sodium and potassium carbonates and bicarbonates.

## 5. (AMENDED)

An acid-gas absorbing tablet as set forth in claim [1 including a second basic salt, and] 3 wherein said [at least one] first basic salt and said second basic salt are selected from the group consisting of sodium and potassium carbonates and bicarbonates.

6. (AMENDED)

An acid-gas absorbing tablet as set forth in claim [1] 3 wherein said [at least one] first basic salt is selected from the group consisting of sodium and potassium carbonates, and [a] said second basic salt is selected from the group consisting of sodium and potassium bicarbonates.

7. (AMENDED)

A method of absorbing acid gases from an electronic device comprising the steps of providing an acid-gas absorbing tablet comprising in relatively sufficient proportions by weight at least one adsorbent, a binder, [and at least one] a first basic salt primarily associated with said adsorbent, a second basic salt primarily associated with said binder, and installing said acid-gas absorbing tablet in said electronic device.

10. (AMENDED)

A method as set forth in claim 7 wherein said [at least one] first basic salt is selected from the group consisting of sodium and potassium carbonates and bicarbonates.

11. (AMENDED)

A method as set forth in claim 7 [including a second basic salt, and] wherein said [at least one] first basic salt and said second basic salt are selected from the group consisting of sodium and potassium carbonates and bicarbonates.

12. (AMENDED)

A method as set forth in claim 7 wherein said [at least one] first basic salt is selected from the group consisting of sodium and potassium carbonates, and [a] wherein said second basic salt is selected from the group consisting of sodium and potassium bicarbonates.

19. (TWICE AMENDED)

An acid-gas absorbing tablet as set forth in claim [2] 3 wherein there are present by weight [an] said adsorbent in the amount of between about 73% and 93%, [the binder] polyvinylpyrrolidinone as the binder in an amount of between 4.2% and 25.1%, potassium bicarbonate as said second basic salt in an amount of between about 0.4% and 6.7%, potassium carbonate as said first basic salt in an amount of between about 0.2% and 8.4%, and water in an amount of between 0% and 30%.